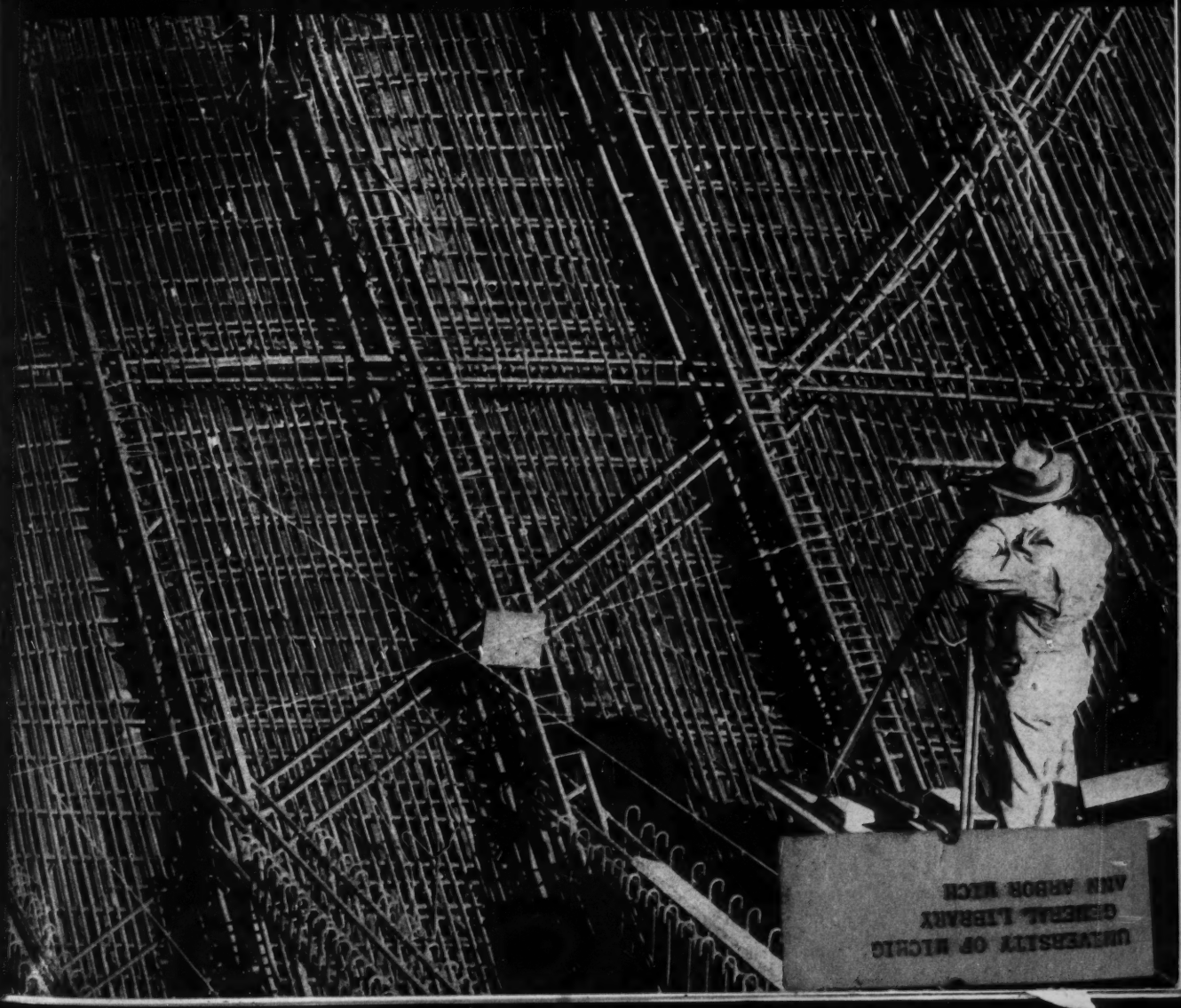
ENGINEERING NEWS-RECORD

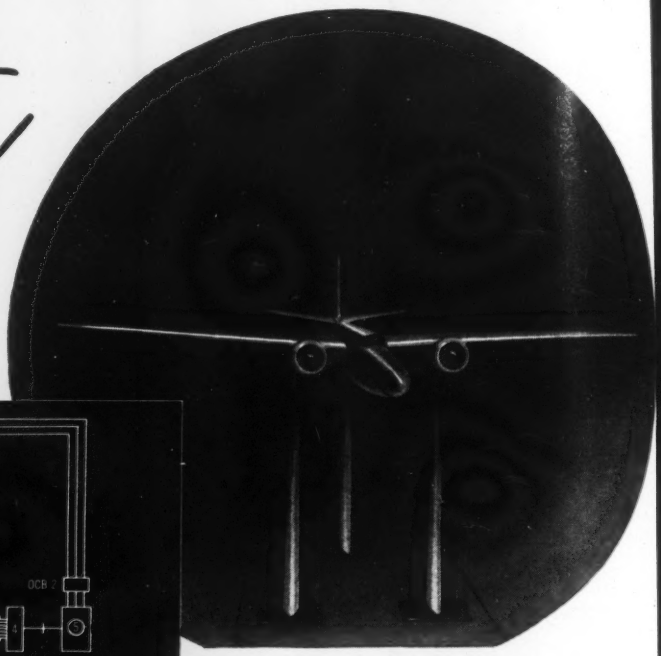
Ribs of steel pattern the frame for ships of concrete.

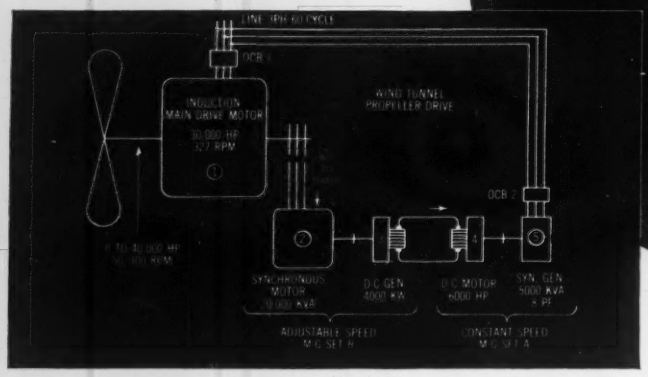


UNIVERSITY OF MICHIG
GENERAL LIBRARY
ANN ARBOR MICH

The Wind Tunnel That Drives Air

600 miles per hour!





The story of a powerful fan drive, with accurate speed control, designed for a wind tunnel in which tomorrow's planes will be tested

TODAY dive bombers fly 400 miles per hour, but designers are testing and perfecting planes which will appreciably exceed even this tremendous speed.

These tests could not be carried on, however, in the wind tunnels in existence a short time ago, for they were not large enough, nor did they provide a great enough wind velocity. General Electric engineers were called upon to design new electrical equipment to meet the requirements in larger wind tunnels. They designed a motor of the wound-rotor type, rated 30,000 hp, 327-rpm synchronous speed, to drive the wind tunnel fan blade. It provides a wind velocity of 600 miles per hour, and its speed control is accurate to ¼ of one per cent!

The entire system, of which this motor is a part, is shown in the diagram. Field control of the d-c motors 3 and 4 is employed, and they in turn control the speed of the synchronous motor 2. An increase or decrease in the speed of 2 results in a decrease or increase in the speed of the fan blade. Accurate speed control is thus provided in a fan drive of unprecedented size.

Throwing the Load on the Line

This drive has other interesting features as well. One of them is the method of starting, to ease the tremendous load of a 30,000-hp motor onto the main power line. The constant-speed m-g set A is started, and it in turn starts the adjustable-speed set B. The oil circuit breaker 1 is left open. When the m-g set B is running at a speed of 60-cycles, and the main motor 1 is at a standstill, the latter acts as a transformer. Thus, 60-cycle power exists at both sides of the oil circuit breaker, and the switch can be closed *with no line disturbance at all.*

By
C. C. CLYMER
Industrial Engineering Department, General Electric Company

Recovering Electricity

Also of interest is the saving in current made possible by this system. When the main motor operates at reduced speeds, the slip energy is employed to run the m-g set B, where this energy is converted to d-c power. This power runs the m-g set A, where the d-c power is converted to a-c power of line frequency and then returned to the incoming line.

This is another example of the application of experience and skill by General Electric engineers to solve a problem created by today's needs. We would like to work with you on your problems, too. *General Electric, Schenectady, N. Y.*

GENERAL ELECTRIC

655-31-8080

The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • MARCH 4, 1943 • VOLUME 130 • NUMBER 9

Road equipment to be pooled under state-WPB plan

Fullest possible utilization of existing municipal, county and state equipment is sought. Coordinators in each state will have WPB backing.

All state highway officials have been urgently asked by the Governmental Division of the War Production Board to work out plans for pooling the use of all the roadbuilding and maintenance and snow removal equipment in their states—county and municipal equipment as well as state-owned. Failure to do so, it is pointed out, will make it difficult or impossible to get priorities on new equipment.

State highway departments were asked early last month to formulate and submit to WPB plans for pooling equipment in their states. To date, ten states have submitted satisfactory plans, 25 are working on plans, and one has refused to undertake a pooling program.

Detailed formulation and administration of plans are being left to the states themselves. The general idea, however, is that some official such as a state highway commissioner or one of his subordinates will be assigned as coordinator of the pool. State and local agencies having temporarily or permanently idle equipment which they are willing to rent will report the fact to him. Similarly, if they need equipment, these agencies will ask him where they can get it. Arrangements for renting the equipmnt at some equitable rate within OPA price ceilings will be part of each plan.

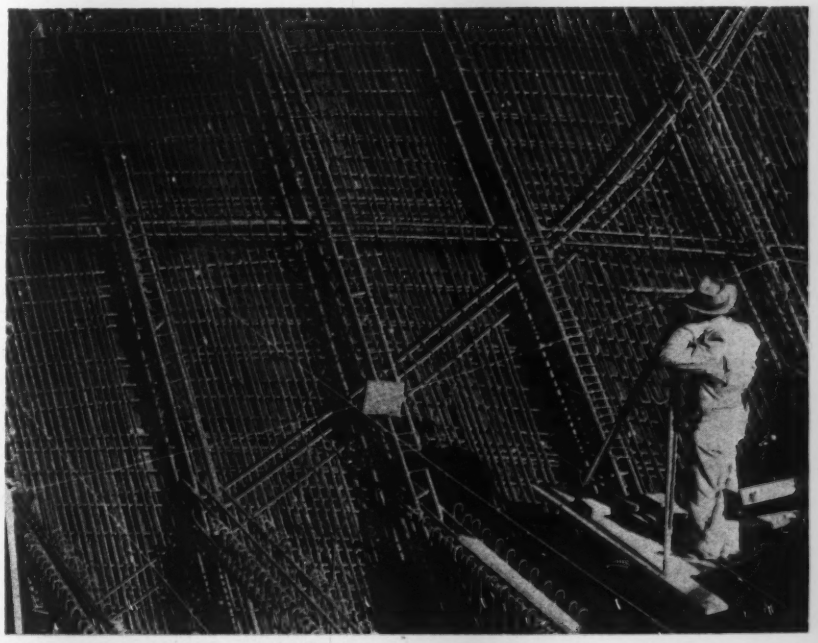
In addition to seeing that equipment doesn't stand idle, the coordinator will be expected to see that important jobs don't go undone while equipment is used on minor work. If a county, for example, lacks equipment for an important access road and the coordinator knows that another county is using equipment on some back street, he will ask the second county to yield its machines. If the request is refused, the coordinator can call on WPB for help. The WPB holds that it has the power to requisition such equipment, but in any case is in a position to apply strong moral pressure.

The Governmental Division of the WPB some months ago took an inventory of equipment owned by local governments (not to be confused with the continuing survey of used construction equipment maintained by the Construction Equipment Division), and use of this survey will be available to state coordinators.

Postwar works bill reintroduced in Congress

A bill, entitled "First Post War Planning Act of 1943," and bearing the number H.R. 7898, was introduced in the House of Representatives Feb. 18, by Representative Walter A. Lynch of New York, and has been referred to the Ways and Means Committee of which Representative Robert L. Doughton of North Carolina is chairman.

The new bill is identical with H.R. 7782, which was introduced in the last Congress by then-Representative Alfred F. Beiter of New York (*ENR*, Dec. 3, 1942, p. 758). It authorized the appropriation of $100,000,000—for the preparation of plans for public works to be undertaken in the postwar period.



Reinforcing steel forms the rib pattern for concrete ship

Reinforcing totaling 60 to 70 percent of the weight of plate for a comparable steel ship goes into concrete barges and boats. Here, rods are in place for the 4½-in. thick hull and the stiffening frames near the stern of a 14,000 ton gross-weight barge.

Inside forms to inclose these rods are built accurately to plan and shape on a mock-assembly, then brought to the hull for installation. Exceptional accuracy in positioning reinforcing is necessary. Parts of the stiffening frames are prefabricated.

An article describing concrete ship construction where the entire ship was formed at one time and poured in one lift from keel to deck level will appear in a forthcoming issue.

More contractors get E's from Army Engineers

Last week marked what looks like the beginning of an offensive by the Corps of Engineers to award Army-Navy E's to its deserving contractors. Prior to that time only three E awards had been sponsored by the Corps, but by the end of this week this number will be increased to thirteen. The list of new awards and the speakers at the various ceremonies follows:

Feb. 23, Hunkin-Conkey Construction Co., Cleveland, for work on the Cleveland aircraft assembly plant. Speaker, Col. J. R. Hardin, executive officer, construction division, Office of Chief of Engineers.

Feb. 23, F. H. McGraw & Co., and Freeto Construction Co., for Jayhawk Ordnance Works, in Kansas. Speaker, Col. Lewis A. Pick, division engineer, Missouri River Division.

Feb. 25, West Construction Co., Seattle, for railroad work in Alaska. Speaker, Col. Theodore Wyman, Jr., division engineer, Northwest Division.

March 3, E. I. DuPont de Nemours & Co., for Wabash Ordnance Works in Indiana. Speaker, Col. E. E. Gesler, executive officer, administrative branch, Office of Chief of Engineers.

March 4, Frederick Snare Corp., for depot at Port Newark, N. J. Speaker, Col. Beverly C. Dunn, division engineer, North Atlantic Division.

March 4, E. B. Badger & Sons Co., for West Virginia Ordnance Works. Speaker Brig. Gen. Leslie R. Groves, deputy chief, construction division, Office of Chief of Engineers.

March 5, E. I. du Pont de Nemours & Co. for Chickasaw Ordnance Works in Tennessee. Speaker, Col. John S. Bragdon, engineer, South Atlantic Division.

March 5, Manhattan Construction Co. and S. E. Evans Construction Co., for Camp Chaffee, Ark. Speaker, Maj. Rosewell P. Rosengren, chief, technical information, Office of Chief of Engineers.

March 6, James King & Son, for Willow Brook Hospital, Staten Island, N. Y. Speaker, Col. E. K. Daly, assistant, operations branch, construction division, Office of Chief of Engineers.

March 8, J. A. Jones Construction Co., for airborne command base, Hoffman, N. C. Speaker, Major Gen. Eugene Reybold, Chief of Engineers.

The three "E" awards previously made under sponsorship of the Corps of Engineers went to the Ben C. Gerwick Co., of San Francisco, for work on piers and warehouses at Oakland, Calif.; to Hunkin-Conkey Construction Co. and Holabird & Root jointly for the Scioto Ordnance Works in Ohio; and to the Andrew Weston Co. for work at Montauk Point, Long Island. The latter presentation was made on Feb. 12 by Col. Frederick S. Strong, chief, operations branch, construction division, Office of Chief of Engineers.

Wide World Photo

Calship launches 149th Liberty Ship

The "S. S. Phineas Banning," 149th Liberty ship from the yards of the California Shipbuilding Corp., slides down the ways Feb. 21. In the foreground, gantry cranes are lowering steel into place for the hull of the forthcoming 150th ship.

Calship was one of the first yards laid out to provide for extensive prefabrication, and on Sept. 27 the yard celebrated its first anniversary. On that date the 67th ship was delivered to the Maritime Commission, which put the yard 202 days ahead of their original sched... This yard holds a record for the largest nu... of ships delivered in a twelve-month perio... although it has only 14 ways as compared ... the 16 of some competitors. Steel fabricat... methods were described at length in Engine... ing News-Record, Jan. 28, p. 116.

At the rate these EBC-2 cargo ships a... being turned out, this 150th ship now bei... laid will be turned over to the Maritime Co... mission six months ahead of scheduled deliver...

• • •

Alcan highway will be widened according to plan

Brig. Gen. J. A. O'Connor, commander of the Northwest Service Command has announced that the 1,800 mile Alcan Highway from Dawson Creek, B. C., ... Gulkana and Fairbanks, Alaska, will b... widened throughout its entire length th... summer to a 24-ft. gravelled highway ... keeping with the original plan. (*ENR* ... Dec. 17, 1942, p. 859; Dec. 31, 194... p. 907, and Jan. 14, 1943, p. 63.)

Permanent bridges will be installe... over the streams now spanned b... temporary structures. Many other facili... ties for the road will be provided on ... permanent basis.

Today the road is carrying 60,000 t... 70,000 tons of cargo a month, and coul... carry much more if sufficient rolling stoc... were available, according to the repor... by General O'Connor.

ENGINEERING NEWS-RECORD. Published every Thursday. **Return postage guaranteed.** Vol. 130, No. 9. **Price 25c per copy. Allow at least ten days** for change of address. All communications about subscriptions should be addressed to the Director of Circulation, 330 West 42nd Street, New York, N. Y. **Subscriptions,** United States, U. S. Possessions and Latin American Republics, $5.00 for one year, $8.00 for two years, $10.00 for three years. **Canada** $5.50 for one year, $9.00 for two years, $11.00 for three years. Great Britain and British possessions 54 shillings for one year, 108 shillings for three years. All other countries, $9.00 for one year, $18.00 for three years. Entered as second-class matter October 29, 1936, at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Printed in the U.S.A. Cable Address: "McGrawhill New York." Member A.P.B. Member A.B.C. Copyright 1943 by McGraw-Hill Publishing Company, Inc. James H. McGraw, Founder and Honorary Chairman: James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice-President; Mason Britton, Vice-President; B. R. Putnam, Treasurer; Joseph A. Gerardi, Secretary; J. E. Blackburn, Jr., Circulation Manager. Publication office: 99-129 North Broadway, Albany, N. Y. **Editorial and Executive Offices: 330 West 42nd St., New York.** District Managers and Branch offices: Fred G. Hudson, 520 N. Michigan Ave., Chicago; J. W. Otterson, 68 Post St., San Francisco; Aldwych House, Aldwych, London, W. C. 2, England; Washington; J. M. Speckman, New York; A. B. Cozzens, Philadelphia; E. E. Duff, Jr., Cleveland; B. F. Horn, Detroit; Richard Y. Fuller, St. Louis; R. N. Phelan, Los Angeles; J. L. Ballard, Boston; Ralph Maultsby, Atlanta, Ga.

anadian engineers hold short meeting entered on their part in war effort

e Alcan Highway, manpower problems, shipbuilding, civil defense d postwar planning discussed by Engineering Institute of Canada

e engineer and the war was the inating theme of the 57th annual ing of the Engineering Institute of ada, held in Toronto, Feb. 11-12. One e very few major annual conventions e held in Canada this winter, in view ar conditions, the meeting had been roved by high governmental authori- in view of the place occupied by ineers in the Canadian war effort. pite difficulties of travel, registration he meeting exceeded 800.

he program for the convention de- ed radically from previous practice that only one technical session was d at any one time, each being devoted a major topic related to engineering the war. Addresses at the two lunch- meetings were in the nature of tech- al papers; only the annual dinner lowed previously established custom, guest speaker being E. C. Elliott, esident of Purdue University, and ief of the professional division of the artime Manpower Commission. In a y witty speech, Dr. Elliott dealt with npower problems in a broad survey war effort and outlined some of the fficulties surrounding this most im- rtant branch of war work.

Engineers honored

At the dinner the institute awards for e year were presented, the principal esentations being of the Gzowski edal (senior technical award) to S. D. sh, assistant professor of civil engi- ering, Queen's University, Kingston, r a paper on rectangular slab design, d two Julian C. Smith medals, for ntributions to the development of nada, to H. G. Acres, consulting engi- er of Niagara Falls, who has been gaged recently on the great Shipshaw wer project, and R. M. Smith, deputy inister of highways for the province of ntario, who served as one of the con- act managers on the Alcan Highway. K. M. Cameron, chief engineer of the epartment of Public Works, Canada, as inducted as new president of the stitute at the close of the dinner. He ucceeds Dean C. R. Young of the Uni- ersity of Toronto to whose work during is year of office very high tribute was aid.

First of the two luncheon addresses as that of Brig. Gen. C. L. Sturdevant, ssistant Chief of Engineers, U. S. rmy, who came up from Washington speak on the Alaska highway. At- ndance at this luncheon exceeded all xpectations, the hotel accommodation being taxed to the limit, and many being turned away. Desmond A. Clarke, director-general of shipbuilding in Canada's Department of Munitions and Supply, speaker at the second luncheon meeting, took as his subject "The Battle of the Shipyards." Explaining that at the outbreak of the war Canada had, in effect, no real shipbuilding facilities for other than small craft, Mr. Clarke announced that the 200th war vessel would soon be launched from Canadian shipways—an achievement of which he thought Canada might well be proud, and one dependent on the work and skill of engineers in many branches of work, to which he paid tribute. Mr. Clarke made a strong appeal to all listening to avoid complacency with regard to what has to be done, and what has yet to be achieved. Stressing the fact that submarine warfare was still the greatest menace to the successful termination of the war, Mr. Clarke urged all concerned in any way with shipbuilding to see to it that the battle of the shipyards—the greatest fight of all—is won. As a supplement to the address, there was shown a first release of a Canadian government film "Freighters under Fire," showing a convoy under attack at sea, the film including sections taken from a captured German submarine which showed the attack as seen from the attacking undersea vessel.

Professional service

At the annual business meeting of the institute, good progress was reported for the past year, with membership at a new high (5,652) and finances in a satisfactory position. Committee reports disclosed a wide variety of work achieved; of special interest was the report of the committee on professional interests which was able to report the signing, in the year just past, of the fourth cooperative agreement between the E.I.C. and a provincial professional association—that of New Brunswick, and the preparation of the draft of a fifth such agreement for the province of Manitoba. Preliminary discussions have been started with a view to preparing a similar agreement with the Corporation of Professional Engineers of Quebec; when this is consummated, only two provinces (Ontario and British Columbia) will be left without cooperative arrangements with the Engineering Institute.

Dean C. R. Young delivered his closing presidential address at the business session. In it he reviewed the probable place of the engineer in the postwar world, and posed a challenge to all to see to it that engineers do not fail in meeting the responsibilities that will then be theirs.

Civil defense activities

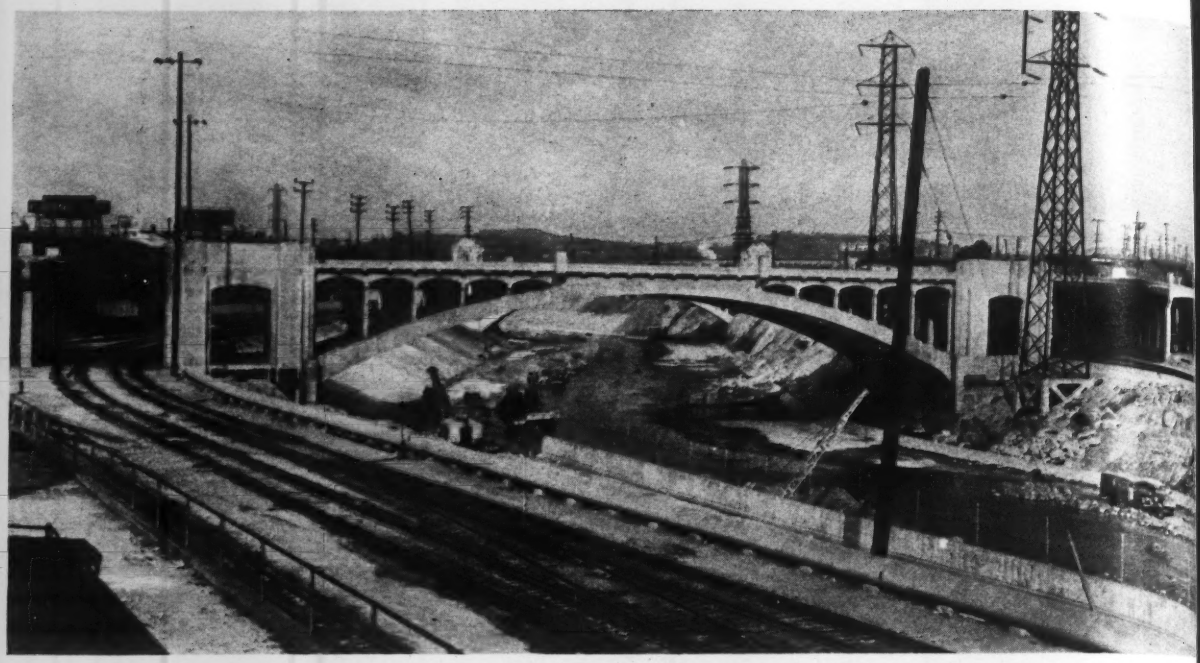
Work of the institute's committee on the engineering features of civil defense was reviewed at the first general session by John E. Armstrong, chairman of the committee and chief engineer of the C. P. R. Four chairmen of sub-committees also spoke on their respective branches of work: H. F. Bennett on the publication "Structural Defense against Bombing" and the work that a local section can do in cooperating with local authorities; R. F. Legget on organization for emergency repairs to damage of major civil structures; G. McL. Pitts on measures for the protection of existing and new buildings; and I. P. McNab on specifications for air-raid shelters, his suggestion being that no general shelter specification should be prepared for Canada.

General discussion revealed a number of ways in which local committees (which the institute has organized across the Dominion) can assist local A.R.P. authorities, Mr. Bennett explaining the close cooperation that has been achieved in London, Ontario, and the surrounding area. It was explained that early in November the Engineering Institute of Canada, the Royal Architectural Institute of Canada and the Canadian Construction Association, jointly over the signatures of their presidents, had submitted to the Government of Canada a proposal for necessary organization for the prompt repair of major engineering structures that may be damaged by enemy action. The proposal has been acknowledged but correspondence was still being exchanged with the government with regard to it, and to its relation with what is generally known as A.R.P. work, for which a governmental organization at present exists.

Postwar reconstruction

The last general session was devoted to the subject of Postwar planning and reconstruction. It was attended by almost 500 members, an indication of the interest now being shown in this forward looking aspect of war work. Work of the Dominion Government's Advisory Committee on Reconstruction outlined by K. M. Cameron, chief engineer, Department of Public Works, Canada, and chairman of the main committee's subcommittee on construction projects. The main committee and its several subcommittees, dealing with agriculture, labor requirements, construction, and natural resources, is advisory only, Mr. Cameron explained. By a recent change, it

(*Continued on page 9*)



Aliso St. viaduct carries two interurban tracks and a four-lane roadway across main-line railroads on both banks of the Los Angeles River. The river channel is being enlarged and paved as part of the city's flood-control plan.

Los Angeles Completes Big Viaduct Project

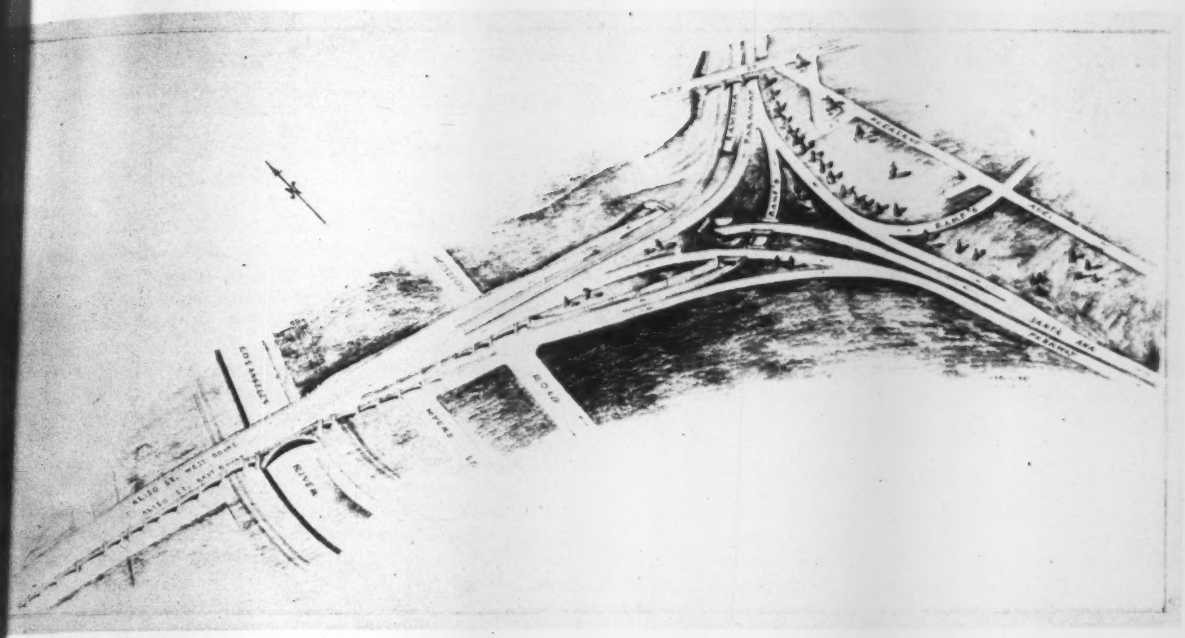
Approaches to the main river crossing consist of reinforced concrete rigid frames of 35-ft. and 40-ft. spans. There are 19 of these approach spans.

The $5,000,000 Aliso St. viaduct project just completed in Los Angeles is the latest and most notable of numerous crossings of the Los Angeles River channel, which traverses the city's industrial district. Nearly a score of bridges are required to carry important streets, not only across the river channel itself, but over the main lines and yard trackage of the Santa Fe and Union Pacific railroads that crowd both banks.

Link in express highway system

The Aliso St. crossing, an important link in the express highway system planned for the greater metropolitan area, is the eleventh in the series of recent bridges that modernize traffic connections between the central business district and the easterly portion of the city on the far side of the channel. The channel span is a 222-ft. fixed, reinforced concrete arch with six ribs. Over Mission Road the supporting structure is a reinforced concrete modified hollow box-girder rigid-frame span which is continuous on each end with an 80-ft. hollow box-girder anchor span. There are also nineteen reinforced-concrete rigid-frame approach spans of 35 to 40 ft. Over-all length of the project as a whole totals 1,808 ft.

The main roadway, 66 ft. wide, has a central strip used jointly by the highway

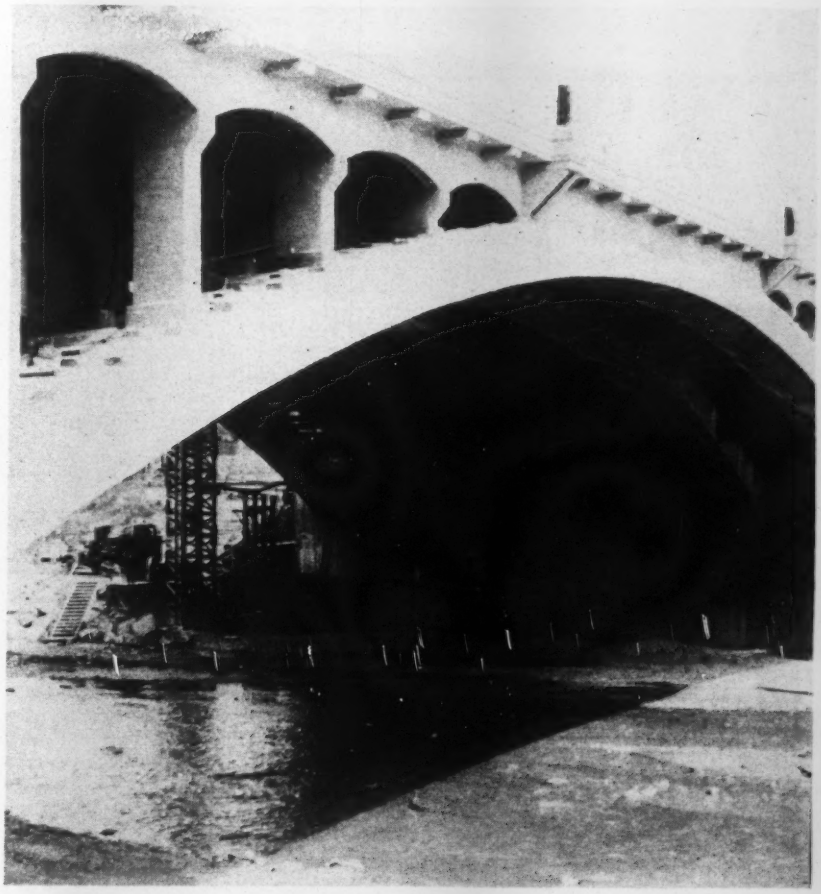


A braided system of ramps, roadways and underpasses to the east of the Aliso St. arch connects with two parkway arteries.

d the double-track Pacific Electric terurban Ry. and also two traffic lanes each direction on both sides of the cks. At the sides are 4-ft. sidewalks. e "peeling off" ramps at the grade parations have 24-ft. roadways while braided ramps and roadways at the t end will be 24 and 35 ft. wide. The al project will include a braided sys- of approaches, ramps, roadways and derpasses connecting the main viaduct th the Ramona Blvd. parkway artery nning northeasterly and the Santa Ana rkway artery running southeasterly m the viaduct.

Financial contributors

The $4,979,100 estimated cost of the liso St. crossing project is being fi- nced jointly by city, county, state, the ee railroad companies and the WPA. e last named furnished 35.3 percent the cost. Design was under super- ion of Lloyd Aldrich, city engineer, d Merrill Butler, deputy engineer; W. Stewart, bridge engineer, H. H. nter, rapid transit engineer and C. E. Wikoff, engineer of inspection. A. A. ssell was general superintendent for WPA.



The six ribs of the 222-ft. span appear in this low-level view taken during construction.

North Atlantic highway officials meet to discuss current problems

Three-day meeting devoted to discussion of problems brought to the state highway departments by war conditions.

Active discussion of the impact of war conditions on highway maintenance characterized the 18th annual meeting of the Association of Highway Officials of the North Atlantic States held in New York Feb. 17-19. Highspots of the program were papers by Thomas H. MacDonald, U. S. Commissioner of Public Roads, on the conduct of state highway departments during the war period, a forecast of conditions to be met after the war, by G. Donald Kennedy, former head of the Michigan Highway Department and now vice-president of the Automotive Safety Foundation, and an illustrated talk on the Alcan Highway by Harold J. McKeever, associate editor, *Roads & Streets*.

New officers

At the annual meeting of the board of directors, Herman A. MacDonald, commissioner of public work for the state of Massachusetts, was elected president. Mr. MacDonald has been acting as president since the resignation of E. Donald Sterner, former head of the New Jersey highway department. William J. Cox, state highway commissioner of Connecticut was elected vice president and A. Lee Grover was reelected secretary-treasurer.

An essential industry

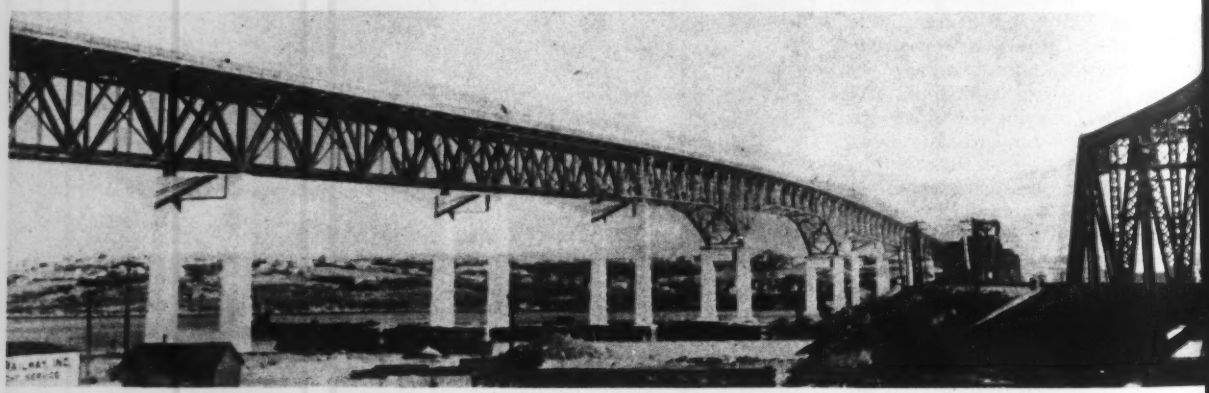
Continued recognition of highway maintenance as an "essential industry" was asked by the association in the first of a series of resolutions adopted to bring the findings of the meeting into concrete form. Paul V. McNutt, head of the War Manpower Commission, was urged to transmit to each office of the WMP an explicit statement of that classification so that the present uncertainty with respect to the draft status of maintenance employees will be cleared up. Other resolutions sought to have state highway departments exempted from the provisions of ODT order No. 21 for the control of commercial vehicles and requested the War Production Board to expedite procurement of repair parts for highway maintenance and construction equipment. Like assistance in getting roads and bridge material was asked of the WPB.

Congress was asked to authorize appropriation of federal-aid funds for the fiscal years 1944 and 1945 for expenditure as soon as conditions permit highway construction to be resumed, and to extend the availability of unexpended federal-aid funds. Also asked of Congress was continuation of the basic principle of federal-aid; but the association requested Congress to incorporate in future federal-aid authorizations a new rule for federal-aid allocations to be based on recommendations of Thomas H. MacDonald, head of the Public Roads Administration. This new rule would be predicated on the finding of the survey of highway conditions and traffic needs that have been conducted by the government agency.

Postwar operations

Authority to use unexpended balances of federal-aid funds for purchase of right-of-way for highways to be built in the postwar period was asked of Congress, and the legislative bodies of the North Atlantic states were urged to provide funds and personnel for the preparation of plans and specifications for such highways.

The federal government was asked to withdraw from the field of road-user taxation, leaving the field open to the states. Similarly, state instead of federal regulation of the size and weight of motor vehicles was urged.



Operating deficit looms as New London-Groton, Conn., toll span opens

A 5,926-ft. long, $6,500,000 high level toll bridge over the Thames River connecting New London with Groton, Conn. was opened Feb. 27. The structure has a central cantilever section 1240-ft. long with anchor arms 352.5 ft. and channel span of 540 ft. of which 216 ft. is a simple suspended truss. Flanking each end of the main spans are four 312.5 ft. deck trusses arranged in two-span continuous units. Deck plate-girder spans make up the rest of the bridge. There are two 24 ft. wide roadways separated by a 2.5 ft. central mall and two 4 ft. wide sidewalks.

There has been some doubt that tolls from restricted war time travel would return the $344,000 necessary annually for gross operation and debt service on the bridge. A federal subsidy asked from the Navy because of the importance of the structure to Navy work was refused. The Connecticut legislature has approved a bill providing for borrowing from the state general fund to finance operating deficits. The Navy, in a counter suggestion, asked Connecticut to offer a plan for maintenance of the existing swing structure in condition for emergency use at federal expense.

The bridge was built for the Groton-New London Bridge Commission. Design of the structure was done by the Connecticut highway department of which W. J. Cox is commissioner. A. W. Bushell, deputy commissioner was in direct charge of the work, with W. G. Brenneke project engineer.

The firm of Parsons, Klapp, Brinckerhoff & Douglas were consultants to the Groton-New London Bridge Commission on design and construction and were reperesented on the work by Irvine Gould. During part of the erection Fay, Spofford & Thorndike were consultants to the highway department.. For the latter firm R. E. Crawford was resident engineer.

Substructure of the bridge was put in by A. I. Savin Construction Co. and the superstructure was erected by Harris Structural Steel Co.

Regulations issued on 48-hour week clarify employer responsibilities

Expanding organizations in shortage areas should go to longer work week immediately; others to seek advice from local WMC directors.

Ever since the President last month ued his executive order directing in- stry to go on a 48-hour week, there been general bewilderment as to at particular employers are supposed do about. Last week the War Man- wer Commission issued formal regula- ns which removed a little of the be- lderment.

Affect of the order is limited, except the lumbering and non-ferrous min- industries, to 32 critical labor short- e areas. It will probably be extended on to 116 other areas where the labor pply is known to be short. The exact undaries of the areas are to be deter- ined by the WMC area directors.

Employers located outside the 32 criti- l areas have no obligations under the der and may continue present practices.

Employers in the critical areas, pre- mably including construction and en- neering firms, fall into two groups. hose whose organizations are expand- g. so that they can increase hours with- t laying off any people, should go on a 48-hour week immediately. They are t supposed to hire any additional em- loyees until they have done so.

Employers who would have to lay off nployees in order to go on a 48-hour ek should notify the local WMC area rector as to what men they would have lay off. The area director may de- rmine that the men are of a type who n be placed in other jobs at once. In is case the firm will be directed to go a 48-hour week immediately and lay f the men.

Otherwise, the area director will assign e firm a schedule under which it will adually lay off its men and work wards a 48-hour week.

Union agreements out

Establishments regularly employing ss than eight workers are exempt from e order, as are part-time workers. oreover, if any federal, state, or local w limits hours of work to less than 48, e law is to be obeyed. However, union greements calling for a work-week of ss than 48 hours are abrogated by the MC order. Most construction is now overned by the so-called OPM Agree- ent, which permits working of any ours provided that time and a half is aid after eight hours in any day and r work on Saturdays or Sundays.

In addition to these exemptions, the egulations give complete flexibility to e decisions of the local WMC area director. Upon a showing that a 48-hour week would be impracticable for particular operations or would not contribute to reduction of labor requirements, the director may exempt any firm from the order. Or he may set any greater or lesser period than 48 hours as the standard work week.

Thus, the thing for an employer to do if he sees difficulties in the application of the order is to go on his local area director.

One difficulty—which perhaps only the courts can settle—will arise in the case of fixed-price construction contracts. If the price in such a contract was set on the basis of labor at straight time and the government then compels overtime work, who pays for the overtime wages?

Overtime payments

As to payment for the overtime worked: Employees covered by the wage-hour law must, of course, be paid time and a half for the extra eight hours. Other employees, if they are covered by a union agreement or customary arrangement, should be paid for the overtime in accordance with the terms of the agreement. Hourly rate employees not falling in either of these groups, should be paid for the extra hours at straight time. If it is desired to pay them time and a half, permission must be obtained from the War Labor Board or, if they earn more than $5,000, from the Treasury. Before salaried employees not covered by the wage-hour law can be given any extra pay to compensate them for the extra hours worked, permission must be obtained from the Treasury; this will ordinarily be granted, except in the case of very high salaries.

WPB denies priorities to two construction firms

Two Jamaica, New York, construction firms, one a partnership known as Krauss, Jacoby and Krauss, the other the For-Win Realty Company—also owned by these same partners—have been deprived of priority benefits by the War Production Board for the next three months as a result of failure to adhere to the terms of stop-construction order, L-41.

The suspension order states that the For-Win Company, without seeking the required authority to begin construction, started rebuilding the Berger department store, Utica, N. Y., which had been damaged by fire. The contracts for this work were later assigned to the partnership company, which completed construction. Cost of the reconstruction work amounted to $45,000.

P-46 order revoked by new WPB rating

First order to be issued by the newly established Office of War Utilities in the War Production Board was announced last week, and bears the number U-1. This replaces the former P-46 order and all amendments and supplements thereto, reenacting most of the P-46 provisions.

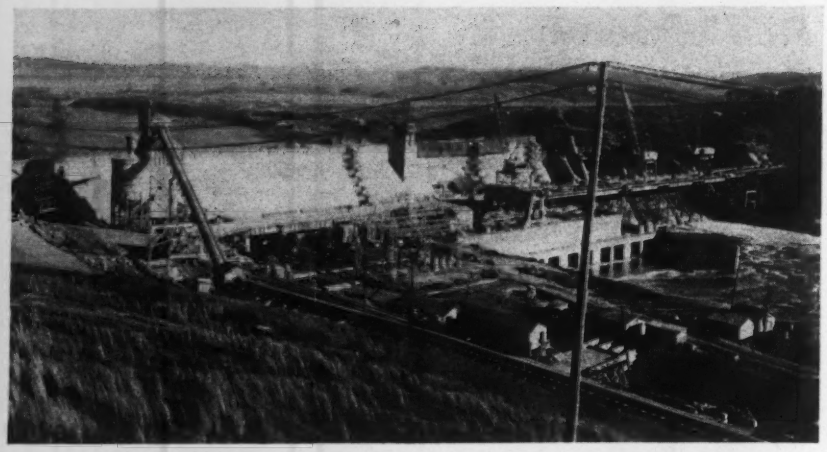
The Office of War Utilities was created within the War Production Board on Feb. 13, to administer war activities of electric, gas, water, steam and communication utilities. The U-1 order governs the flow of materials into the entire utilities field with the exception of communications, and is the first industry order integrated with the Controlled Materials Plan.

An important group of provisions within the order, designed to effect sharing of material and equipment in utility inventories, requires utilities to sell surplus stocks as a condition for continuing to receive priorities assistance. These provisions are linked with the creation of regional surplus stock offices, to be in operation throughout the United States next month, through which utilities will carry on the redistribution of their surplus materials and equipment.

The order authorizes the use of a higher rating, AA-1, and a Controlled Materials Plan allotment symbol, to permit utilities to obtain materials for maintenance, repair and minor construction. The order also, for the first time, brings under inventory regulation stocks of controlled material held by utilities for use in construction. It requires utilities to limit such holdings to their needs for the ensuing sixty days. A sharp reduction in the inventory which may be held for maintenance and repair after March 31, 1943, is made in the new order.

Public sanitation services

Public sanitation services, which are not included in the jurisdiction of the Office of War Utilities, will now use P-141 to secure operating supplies and maintenance material. The change was necessitated because the P-46 order was revoked. The P-141 order makes no substantive change from P-46 except to raise the ratings in line with those incorporated in U-1, and to omit certain portions of P-46 that were applicable only to utilities and other sanitation services.



Douglas Dam closed in 13 months

The Tennessee Valley Authority's Douglas Dam on the French Broad River, authorized by Congress Feb. 1, 1942, was closed and reservoir filling started on Feb. 21 of this year. TVA engineers, headed by T. B. Parker, chief engineer, had promised closure of the dam in 13 months and schedule was made despite "hell and high water." The latter was no idle phrase. At one time five 18-in., fourteen 16-in., six 12-in., and many smaller pumps were operating to keep the cofferdam partially dry.

Douglas Dam is a 1,682-ft. long concrete structure with a rise above bedrock of 160 ft. About 536,000 cu. yd. of concrete are required for the main structure and 1,000,000 cu. yd of embankment for a series of saddle dams across a boundary of low hills. The construction record of less than 13 months for a structure of this size is said to have never been equaled, nearest approach being construction, by the same forces, of Cherokee dam on the Holston River a few miles away.

Actual closure of the dam was made Feb. 14 across low sections left in partially completed spillway sections using steel H-beams and precast concrete stoplogs. Sluiceway gates were closed Feb. 21 and the lake level is sufficiently high now for some power operation.

Rapid start on construction was made possible by similarity of the site and available head to Cherokee Dam so that plans were adopted to Douglas virtually without change. Even one of the power units purchased for Cherokee was installed at Douglas as it would have greater efficiency as the first-unit at Douglas than as an added unit at the other structure. Actually 100,000 kilowatts will be added to the TVA system through the one unit now installed at Douglas and use of the water at dams below.

Construction of the dam is under direction of A. L. Pauls, chief construction engineer, and L. G. Warren, project manager. J. S. Lewis, Jr. is construction superintendent and R. C. Perkins is assistant construction superintendent. Thomas F. Taylor is construction engineer assisted by J. W. Clarke.

Col. Charles H. Barth, Chief of Staff in Europe

Col. Charles H. Barth of the General Staff Corps, until recently assistant chief of staff of the United States Army forces in the Middle East, has been elevated to Chief of Staff of American forces in the European theatre.

His first army assignment was with the 13th Engineers at Fort Humphreys, Va., where he later was graduated from the engineers school. His career has included assignments as instructor at West Point, duty in the Hawaiian department, and construction work at Rock Island, Ill., with the 3rd Engineers.

Colonel Barth was stationed with the Rock Island district engineers from September 5, 1936 to September 1, 1939. At this post he was assistant to the chief district engineer and served as head of the operations section of the area. After completing his assignment at Rock Island he went to the Command and General Staff school at Leavenworth, Kan., later acting as assistant to Col. Thomas Larkin on construction at the Panama Canal.

• • •

Macdonald manager of new Walsh-Kaiser ship firm

Walsh-Kaiser Co., Inc., an organization from Walsh Construction Co. and the Kaiser interests have taken over the Fields Point shipyard at Providence, R. I. This yard was started as the Rheem Manufacturing Co. and was planned for construction of Liberty type freighters for the U. S. Maritime Commission.

John S. Macdonald is general manager of the enterprise and a vice president of the new firm. Other officers include T. J. Walsh, president; Henry J. Kaiser, William A. Durkin and Edgar F. Kaiser, vice presidents.

• • •

Louis Kahn replaces Albert as head of firm

Reorganization of the firm of Albert Kahn Associated Architects & Engineers, Inc., Detroit, has elevated Louis Kahn to the position of president of the firm.

The reorganization was made necessary by the recent death of Albert Kahn, the company's founder, and president for many years. Other officers are: Sheldon Martson, vice-president; George E. Miehls, vice-president; Robert E. Linton, vice-president; George K. Scrymgeour, secretary, and Saul Saulson, treasurer.

• • •

Engineer Corps honors Brig. Gen. Daniel Noce

Brig. Gen. Daniel Noce, who organized the Army's amphibian engineers, was awarded a distinguished service medal at ceremonies held at Fort Devens, Mass., Feb. 16.

Maj. Gen. Sherman Miles, commanding the First-Service-Command, decorated General Noce during a review of 4,000 men held in honor of the recipient.

The citation read, in part, as follows: "his leadership and inspiration have contributed in a marked degree toward the readiness of the army to carry out world-wide offensive missions."

• • •

Niagara water power control measure passed

Last week, the New York State Assembly passed and sent to Governor Dewey for his signature a bill to control the use of Niagara River water for power.

Under terms of the measure, the state will have the right to license and control the amount of water used by the Niagara Power Co. for power producing purposes.

The bill was passed despite objections of the Democratic minority block, which charged it would throw the state into litigation with the utility companies.

• • •

Mahony-Troast Construction and the Associated Sub-contractors on the huge one-story concrete building described in *ENR* Oct. 22, 1942 p. 583 were awarded the Army-Navy "E" for outstanding achievement in war construction.

Canadian engineers hold interesting short meeting

(Continued from p. 3)

reports directly to the Prime Minof Canada, and is associated with a rnmental interdepartmental committon the economic features of reconction, and also with the special mittee on reconstruction appointed h session by the Dominion Parliament. The "Postwar Pattern" was discussed Hugh C. Cochrane, Toronto, in which ada's national income, debt and exditure were examined in relation to ada's war effort, and the figures proed into the postwar years in an atpt to forecast the necessary steps that t be taken in planning for the immedipostwar period. The part that private ustry must play in this work was essed, but Mr. Cochrane's figures w that a great nationally supported struction program will be needed as ll, possibly involving an expenditure one and a half billion dollars. The per contained suggestions as to how his could be achieved, large scale reusing schemes being a major part of work proposed.

O. J. Firestone, an economist who has en making an intensive study of the nomics of the Canadian construction dustry for the Advisory Committee on construction (the first such complete dy ever to be made in Canada) preented a lengthy discussion of Mr. ochrane's figures, arriving at a somehat smaller total for the postwar conruction work, but agreeing generally ith Mr. Cochrane's main thesis.

Other contributions to the discussion cluded a dramatic outline of the ravges of soil erosion in southwestern Ontario, and the place that the necessary rehabilitation work should occupy in postwar planning, prepared by Prof. A. F. Coventry, University of Toronto. John C. W. Irwin, a forestry engineer, outlined the place that forestry should ake in postwar reconstruction work. He ttacked vigorously the mishandling of anada's forests in the past and showed, ith actual figures, what work can peedily be provided in some of the mpler ways of forest management that oday are so necessary. Supplementing hese two presentations was a showing f a remarkable documentary film, "The eritage We Guard", prepared by the . S. Soil Conservation Service, and ent to the meeting through the good ffices of the U. S. Department of State.

Members of the management committee f the Canadian Construction Association ere present at this meeting, one of their egular meetings having been specially rranged to make this possible. John B. Stirling, president of the association, poke briefly.

JOBS OF THE WEEK

IMPROVEMENTS, Louisiana
U. S. Engineers, Little Rock, Ark., awarded contract to R. H. Wright Co., Inc., Columbus, Ga., for improvements in Rapides Parish. Cost estimated at $5,000,000.

IMPROVEMENTS, Texas
Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded contract to Brown-Bellows-Columbia, Corpus Christi and Beeville, Tex., for improvements. Estimated cost is $3,500,000.

DWELLINGS, Fort Worth, Texas
James T. Taylor, Fort Worth, will construct 650 dwellings, for C. E. Wooldridge, Fort Worth. Cost estimated at $1,675,000.

HOUSING, Washington
Sound Construction Engineering Co., Seattle, Wash., has been awarded contract for housing, by Vancouver Housing Authority, Vancouver, at $2,706,415. Portland Associated Architects, Portland, Ore., are architects.

IMPROVEMENTS, California
U. S. Engineers, Sacramento, Calif., awarded contract for runways and appurtenant structures, Contra Costa County to Piazza & Huntley, Larsen Brothers and Harms Brothers, Sacramento. Estimated cost $500,000–$1,000,000.

PLANTS, Iowa
Defense Plant Corp. awarded contract for plant to The Weitz Co., Inc., Des Moines, Ia. Estimated cost $1,000,000. Grain Processing Corp. will operate. Smith, Hinchman & Grylls, Inc., Detroit, Mich., are engineers.

DOCKS, Michigan
U. S. Engineers, Detroit, Mich., awarded contract for combat vehicle park unloading docks, Allen County, to Green & Sawyer Co., Lima, O. Estimated cost $1,000,000.

RAILROAD LINE, Mexico
Kansas City-Orient-Mexico Railway, Mexico City, will construct main line to west coast. Estimated cost of about $645,000. Work to be done by purchase and hire method. Dept. Public Works, Mexico City, Mex., is engineer.

HOUSING, Ohio
Cleveland Metropolitan Housing Authority, Cleveland, received lowest bid for constructing Riverside Housing from N. Fish Construction Co. and M. L. Bein, Cleveland, O., at $1,545,000. Franz Warner, and J. O. Williard, Cleveland, O., are architects.

HOUSING, Washington
Nettleton & Baldwin, Seattle, Wash., have been awarded contract by Seattle Housing Authority, for housing project for NHA at cost of $1,215,000. Jones, Bouillon, Thiry & Shay, Seattle, are architects.

PLANT, Ohio
Gillmore-Carmichael-Olson Co., Cleveland, O., has been awarded contract by an industrial company to design and construct plant buildings. Total estimated cost $7,000,000. Defense Plant Corp. will finance.

IMPROVEMENTS, Texas
U. S. Engineers, Galveston, awarded contract for improvements in Cameron Co. to R. W. Briggs and E. B. Darby, Pharr, Tex. $500,000–$1,000,000.

IMPROVEMENTS, Kansas
U. S. Engineers, Kansas City, Mo., awarded contract improvements, Dickinson County, to Garrick Construction Co., Chicago, Ill., and to Air-Made Wells Co., Kansas City, Mo. Total estimated cost $1,500,000. J. W. Radotinsky, Kansas City, Mo., is architect.

IMPROVEMENTS, Kansas
U. S. Engineers, Kansas City, Mo., improvements awarded to Busboom & Rauh, Salina, Kan., sewer and water extensions to Asplund Construction Co., Enid, Okla. Wyatt C. Hedrick, Fort Worth, Tex., is architect. Total estimated cost $1,500,000.

HOUSING, California
Federal Agency, awarded contract for housing units to Robert McCarthy Co., San Francisco, Calif. Estimated cost $12,000,000.

HOUSING, Washington
Vancouver Housing Authority, awarded contract to Ford J. Twaits Co., Sound Construction Co., and Peter Kiewit & Son, Seattle, Wash., for housing units. Cost estimated at $2,706,415.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 12.

MEN AND JOBS

R. W. Ackerman, superintendent of construction on supplementary roads, for the Missouri State Highway Department has been commissioned a first lieutenant in the Corps of Engineers.

Bernard Touhey, former head of the Engineering Division of the Work Project Administration in Arizona, has been named Arizona state engineer, succeeding **W. R. Hutchins,** who resigned recently.

R. C. Thomas is now FWA construction engineer in charge of the erection of two federal recreation centers being built at Durham, N. C., for operation by the United States Organization.

G. E. Wright is now construction engineer and general superintendent for Troy Mayr & Sons Co., railroad and general contractors, Valley Stream, N. Y.

J. E. McReynolds, for the past 18 months county highway superintendent in Tulsa County, Okla., has resigned to enter war work.

Chilton W. McLaughlin, Jr., Wyandotte County, Kansas, surveyor, has been commissioned a lieutenant, j.g., in the Navy Construction Battalions.

J. W. Henry, an engineer for the R. J. Tipton Company on the construction of the Cornhusker Ordnance Plant in Nebraska, has been commissioned a first lieutenant in the Corps of Engineers. He was connected with the Nebraska Highway Department until March, 1942.

Charles S. Davis, formerly an engineer with the J. A. Tobin Co. of Kansas City, Kansas, has been promoted to the rank of Lieutenant Colonel in the Corps of Engineers. Stationed at Omaha, Nebr., he is commander of the seventh district of the Missouri River Division.

Brewer A. Billie, Astoria, Oregon, material and appliance dealer and a graduate civil engineer, has been named civil manager for Astoria.

Charles W. Sheetz has retired as county road commissioner of Shawnee County, Kansas, and has been appointed to the newly created post of general supervisor of roads in that county.

H. O. Brown has recently accepted a post as an engineer with Massey-Harris Ltd. at Toronto, Quebec.

O. D. Henry, Lyon County, Kansas, Engineer, since 1927, has resigned his post. He is succeeded by **C. F. Goldsmith,** formerly with the Kansas State Highway Department.

Emil E. Taylor, area engineer at the Sunflower Ordnance Plant in Kansas, has been promoted to the rank of lieutenant colonel.

Thomas Fowler, associate regional engineer for the Federal Works Agency, St. Paul, Minn., has been commissioned a lieutenant commander in the Navy.

C. K. McLeod, associated with the Walter Kidde & Co. of Canada, Ltd. since 1925 in charge of engineering and sales in Canada, has been elected managing director and chief engineer of the company.

Howard G. Harvey has become principal engineer with the operations branch of the Missouri River Division, U. S. Engineers, at Omaha, Nebr.

Howard E. Hanson, field engineer for the City of Racine, Wis., has been commissioned in the civil engineer corps of the Navy.

George Shepard, area engineer at an airfield in Montgomery County, Kansas, has been assigned to foreign duty. He is succeeded by **Capt. Paul H. Sommers.**

Roland Saint-Pierre has obtained leave of absence from the Quebec Department of Highways to join Bombardier Snowmobile Limited at Valcourt, Que.

John W. Behling, junior civil engineer for the Milwaukee County Regional Planning Department, has been commissioned a lieutenant in the naval civil engineer corps.

Miles C. Kennedy and George V. T. Burgess have been admitted to partnership in the consulting engineering firm of Coverdale & Colpitts, New York. Mr. Kennedy graduated from Yale in 1915, and for twelve years thereafter was engaged in railroad location, construction, and in design work with various companies. He joined the staff of Coverdale & Colpitts in 1927, and resigned in 1932 to become chief examiner for the railroad division of the Reconstruction Finance Corporation. Subsequently he became executive secretary for the Eastern Railroad Coordinating Committee, and then eastern regional director for the Federal Coordinator of Transportation. He then returned to the staff of Coverdale & Colpitts in 1936. Mr. Burgess graduated from Yale in 1925, and for six years was in railroad work and then on steel mill construction with Dwight P. Robinson and with F. H. McGraw & Co. From 1931 to 1940 he was with the Electrical Research Products, joining the staff of Coverdale & Colpitts in 1941.

J. R. Gardner, chief designing engineer Warren & Van Praag, Inc., consulting engineers of Decatur, Ill., has been commissioned as captain in the Sanitary Corps, Company A, 30th Medical Training Battalion, and is stationed at Camp Grant, Ill.

Harold O. Bjorquist, a construction engineer formerly employed by the water department, city of Milwaukee, Wis., has been commissioned a lieutenant, junior grade in the Navy.

C. E. Webb, district chief engineer for British Columbia of the Dominion Water Power and Hydraulic Bureau, has been elected on the council of the Engineering Institute of Canada as a representative of the Vancouver branch.

S. S. Steinberg, dean of the college of engineering, University of Maryland, has been appointed regional representative of the Bureau of Training of the War Manpower Commission. He will serve as consultant and adviser for all engineering, science, and management war training on the college level in the District of Columbia, Maryland, Virginia, West Virginia, and North Carolina.

Frank Lagori, who has been connected with the Craven (N. C.) County Health Department for the past year, has been made supervisor of engineering work being done in connection with a mosquito control project in and around New Bern, N. C.

Lieut. Col. Thomas R. Wolfe, who was formerly a member of the North Carolina Highway and Public Works Commission before entering the armed services as a member of the Ordnance Corps, now is serving with the armed forces "somewhere in North Africa."

A. R. Hollette, Chapel Hill, N. C., engineer and superintendent of the University of North Carolina's water, maintenance and physical plant facilities, has been commissioned a captain in the army and assigned to duty in Brazil.

Carl V. Bergstrom, traffic engineer, formerly employed by the city of Milwaukee, Wis., has been commissioned a lieutenant, (j.g.) in the Air Corps of the navy. He is a graduate civil engineer of the University of Wisconsin.

W. M. Hall has been elected as a director of Chas. T. Main, Inc., architects-engineer of Boston, Mass.

OBITUARY

William L. Lipscomb, 53, chief of the ...rations division of the Vicksburg ...ss.) district engineer office of the ...ps of Engineers, died Feb. 20 at ...ksburg. He had served as chief of ... operation division for nearly a dec-...

Charles M. Caldwell, manager of the ...ional construction department of the ...r Production Board, Boston, Mass., ...d Feb. 17, at Brookline, Mass. He ... graduated from Sheffield Scientific ...hool, Yale University, in 1914. During ...orld War I, he served as first lieutenant ... the Corps of Engineers. Up until the ...e he accepted the position with ...PB, he had been active as a consult-...g engineer in the Boston Area.

Alton D. Adams, a civil engineer spe-...ializing in valuation and rate cases, prior ... his retirement five years ago, died re-...ntly at Wellesley, Mass.

Chester H. Stevens, 62, city engineer, ...ason City, Iowa, for 20 years, died re-...ently.

James A. Emery, utility engineer, and ...ice-president and director of the engi-...neering firm of Ford, Bacon and Davis, ...Inc., of New York City, died Feb. 24, ... Montclair, N. J. He joined Ford, ...Bacon and Davis in 1898, becoming vice-...president in 1923 and director in 1928. ...He was a graduate of the Massachusetts ...Institute of Technology, in the class of ...1893.

W. J. Carlin, 74, formerly with the ...Indiana State Highway Department, and ...the city of Indianapolis Engineering De-...partments, died recently, at Indianapolis.

Harvey A. Mizner, a partner in the ... B. Lynn Construction Co., died Feb. ...3, at Cleveland, Ohio.

Hallett E. M'Clintock, 60, a valuation ...engineer for the Department of Agricul-...ture, died Feb. 22, at Kansas City, Mo. ...During World War I he served as cap-...tain in the Corps of Engineers.

Frank H. Iden, former assistant Dis-...trict of Columbia engineer died Feb. 21 ...after a long illness. He had retired from ...active service in the department in 1941. ...He studied engineering at Washington ...and Lee University, and started with ...the District Government as a construc-...tion engineer. He supervised construction ...of many government buildings in Wash-...ington.

Clifford Eugene Smith, 35, died Feb. 11. Mr. Smith, since his graduation from Alabama Polytechnic Institute had been engaged in engineering work with the U. S. Engineers Office at New Orleans, and in the Pittsburgh area.

Edward K. Smoot, 84, pioneer American Civil Engineer in Mexico, builder of harbors at Galveston and Sabine Pass, Texas, and active in port construction work in Mexico since 1891, died Feb. 19 at his home in Mexico City.

Louis Pairo, 78, retired engineer, long identified in the south in the railway construction field, died Feb. 24 at Atlanta, Ga.

Sewage disposal bill passed by Indiana House

Indiana's House of Representatives has passed a bill which would permit the city of Indianapolis to extend its sanitation facilities to suburban areas, and the bill is now before the state Senate.

Under the measure, the city could extend its sewage facilities to serve an additional 90,000 persons.

With present methods of disposal, according to Representative Ehlers, any flood condition which might arise would seriously jeopardize the safety of the water supply, both inside and outside Indianapolis.

CONTRACTS AND CAPITAL

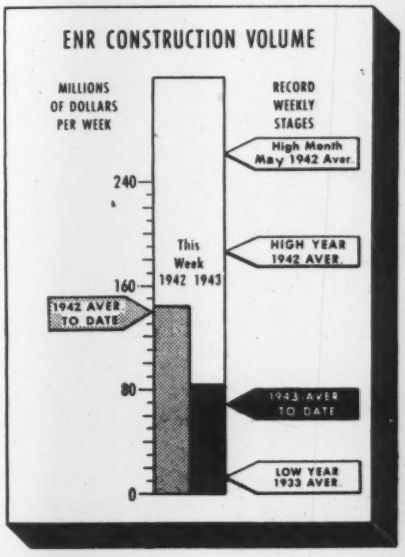
CIVIL ENGINEERING construction volume for the week, $85,809,000, is 41 percent below the total for the corresponding 1942 week, but is above the $54,646,000 reported for the holiday-shortened preceding week. Private construction declines 75 percent from the week last year, and public work is down 35 percent as a result of the 64 percent decrease in state and municipal work, and the 32 percent decline in federal volume.

The current week's total brings 1943 construction to $618,877,000, an average of $68,764,000 for each of the nine weeks of the year. On the weekly average basis, the 1943 total is 51 percent below that reported for the ten-week period in 1942. Private construction, $57,410,000, is 55 percent lower, and public work, $561,467,000, is down 51 percent when adjusted for the difference in the number of weeks reported.

In the classified construction groups, gains over last week are in waterworks, sewerage, commercial and public buildings, earthwork and drainage, highways, and unclassified construction. Increases over the 1942 week are in sewerage, bridges, earthwork and drainage, and unclassified construction.

New capital for construction purposes for the week, $13,500,000, tops the total for the corresponding 1942 week by 267 percent. It is made up entirely of state and municipal bond sales.

New construction financing for the year to date, $29,039,000 compares with $1,376,140,000 for the ten-week period a year ago.



CONTRACTS

(Thousands of dollars)

	Week Ending Mar. 5 1942	Feb. 25 1943	Mar. 4 1943
Federal	$112,869	$38,899	$76,535
State & Municipal	10,766	544	3,923
Total public	$123,635	$39,443	$80,458
Total private	21,766	15,203	5,351
TOTAL	$145,401	$54,646	$85,809
Cumulative 1943 (9 weeks)			$618,877
1942 (10 weeks)			$1,409,004

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1942 10 weeks	1943 9 weeks
NON-FEDERAL	$134,185	$29,039
Corp. Securities	28,832	.....
State & Mun.	91,524	27,539
R.F.C. loans	13,829	1,500
FEDERAL	$1,241,955	.....
TOTAL CAPITAL	$1,376,140	$29,039

ENR INDEX NUMBERS

Index Base = 100

		1913	1926
Construction Cost	Feb. '43	283.48	136.27
Building Cost	Feb. '43	226.90	122.66
Volume	Jan. '43	172	76

FHA MORTGAGES

	Week Ending Feb. 28 1942	Feb. 20 1943	Feb. 27 1943
Selected for Appraisal			
Title II	$14,488	$4,305	$4,296*
Title VI	$22,235	$11,713	$10,220*

* Subject to revision.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents

Symbols and Abbreviations Include

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily
A-E-M Architect — Engineer-Management type of contract.

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply	Unclassified
Sewers, Waste Disposal	Latin America
Bridges, Grade Cross'gs	Public Buildings
Streets & Roads	Commercial Buildings
Earthwork, Waterways	Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Note: To comply with censorship requirements, addresses on some reports are being generalized. Data which would reveal the purpose of the improvements and the size are withheld. The name of contractor and general area are reported.

WATER SUPPLY

PROPOSED WORK

Ark., De Witt—R. H. Maddox, city comr repairing WW sys. $20,000.

Ind., La Porte—Bd. P. Wks., Mayor Jno. S. Martin, chn., City Hall, 100 ft. auxiliary deep well and automatic electric deep well pump. $15,000. Jno. E. Hupp, city engr.

Ky., Hopkinsville—State c/o Dr. A. M. Lyons, dir. State Hospital & Mental Hygiene, Hopkinsville, water filtration plant, distr. sys.

Mass., Wellesley—New watermains, WW extens., imprvs. Over $15,000.

Miss., Jackson—Filter plant addn., clear wells. $269,000.

N. Y., Niagara Falls—Chas. H. Brown, Jr., acting city mgr., 20 in. c.i. watermain to LaSalle section, also enlarging clear water tank capacity by 1½ m.g. Over $45,000. Will seek federal funds. H. W. Clarke, city engr.

Pa., Homestead (br. Pittsburgh)—Carnegie Illinois Steel Corp., Carnegie Bldg., Pittsburgh, making revised plans water intake, etc., left bank Monongahela River, near Ann St., incl. sheet pile wing walls, esplanade, etc. Over $25,000.

Pa., Phila.—Bureau Water, 1,000 ft. 36 in. c.i. line Girard Ave., Booster Discharge, $25,000-$30,000; 24 in. c.i. force pump. main, Upper Roxborough Pumping Station, $25,000.

†Tenn., Clarksville — City, W. Kleeman, mayor, water plant imprv. $45,000. **FWA.** CD 2/11—ENR 2/16.

Tenn., Madisonville—Thos L. Cummings, mayor, exten. water and sewerage sys. $60,000.

Tex., Fort Worth—City, S. H. Bothwell, mgr., WW imprvs., new pump. unit to produce over 200 mgd, using electrically driven centrifugal pumps; also addnl. water storage facilities. $200,000. Freese & Nichols, Capps Bldg., engrs.

B. C., Cloverdale—WW sys., 50,000 gal. elevated tank, electric pump, etc., exten. South Westminster water sys. to Green Timbers. $26,000.

Ont., Bothwell—D. J. Brown, municipality clk., wells for addnl. water supply. $20,000.

Ont., Port Arthur—Pub. Utilities Comn., Port Arthur, 4,500 ft. 12 in. mains in Algoma and River Sts., new booster pump on River St., automatic check valves on 8 mains. $43,000. R. B. Chandler, c/o owner, mgr. S. E. Flook, city engr.

Ont., Windsor—Windsor Utilities Comn., J. Clark Keith, genl. mgr., Canada Bldg., rehabilitation, maintenance pump house. $45,000.

BIDS ASKED

Bids Asked March 8

Sask., North Battleford—P. Hewitt, city clk., concrete reservoir. Underwood & McLellan, 502 Grain Bldg., Saskatoon, engrs.

Bids Asked March 12

†Me., Kittery—Trustees Water Dist., watermains and chlorination plant, Contr. 2, Me. 17-109. **FWA.** Plans deposit $10. Whitman & Howard, 89 Broad St., Boston, Mass., engrs. CD 3/1—ENR 12/31.

Bids Asked March 16

N. J., Newark—City, cleaning, relining 80,000 ft. 48 in. steel water pipes with cement mortar between Macopin Intake and Great Notch to West Paterson. $300,000. Wm. Banks, City Hall Annex, engr. CD 2/15—ENR 2/18.

Bids Asked March 23

†N. Y., Northport—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., D. C., deep well and pump, Proj. 2070. Extended date. CD 2/12—ENR 2/18.

Bids Asked March 25

†Mich., Dearborn—At office Project Engineer Federal Works Agency, Barlum Tower, Detroit, watermains, appurtenant works, Proj-Mich. 20-293. Plans deposit $10; adv. ENR 3/4.

LOW BIDDERS

†California—U. S. Eng., 1209 8 St., Sacramento, Feb. 23, pump. well units, Spec. 438, Sacramento Co., from M. R. Carpenter, 907 Front St., Sacramento, under $50,000. CD 2/18.

†N. Y., Tonawanda—Federal Works Agency, City Hall, Buffalo, watermains, from M. A. Bongiovanni, 3512 James St., Syracuse, $198,660. CD 2/11—ENR 2/18.

†Tex., Amarillo—City, A. P. Hancock, mgr., Feb. 23, 30 in. water supply line, Tex. 41-569, from Nichols Pipe Co., 3028 Durango St., El Paso, $209,603. **FWA.** CD 2/12—ENR 1/21.

Wash., Bremerton—Installing 9,380 ft. 16 in. c.i. pipe and specials, from Valley Constr. Co., 8423 48 Ave. S., Seattle, $34,055.

CONTRACTS AWARDED

†Alabama—U. S. Eng., 494 Spring St. N.W., Atlanta, Ga., filter plant, Calhoun Co., to A. K. Adams Co., 542 Plum St. N.W., Atlanta, Ga. Est. $250,000. Bids 2/18.

Ala., Montgomery—Water imprvs., to Bush Building Co., 805 8 Ave. N., Nashville, Tenn., about $400,000. Bids 2/23. CD 2/12—ENR 2/18.

†Calif., Bakersfield—Dpt. Agriculture, Emergency Rubber Project, 315 W. 9 St., Los Angeles, overhead sprinkler sys. together with water supply lines, etc., at Worthington and Caliente guayule nurseries near here, Inv. 57, to Associated Engineers, 3606 El Camino Real, Palo Alto, $135,993. Awarded 2/16.

†Florida—U. S. Eng., U. S. Courthouse, Post Office, Jacksonville, excav., concr. work, underground storage tanks, pipe w... valves, fittings, pump house superstructu... Palm Beach Co., to The Murphy Constr. C... Clare Ave., West Palm Beach, under $34,...

†Florida—U. S. Eng., U. S. Courthouse, Post Office, Jacksonville, water supply sy... Neg. Jax 43-617, Sarasota Co., to Cleary B... Constr. Co., Georgia Ave., West Palm Beach, under $50,000. Awarded 2/19.

†Georgia—U. S. Eng., Post Office Bld... Savannah, ground storage reservoir, pum... house, motor house, piping equip., e... Thomas Co., to A. S. Wikstrom, Mobile, A... under $50,000.

†Louisiana—U. S. Eng., 300 Bway., Li... Rock, Ark., addnl. water storage facili... Rapides Parish, to Rayne Lumber Yard, In... Rayne, under $50,000.

†Texas — U. S. Eng., Fort Sam Houst... rein.-con. water storage tank, Tarrant Co., ... J. B. Clardy Constr. Co., Fort Worth, und... $50,000.

†Texas—U. S. Eng., 25 St. and Avenue ... Galveston, water treatment plant, Maveri... Co., to H. B. Zachry, P. O. Box 596, San Anto... under $50,000.

†Tex., Amarillo—City, c/o A. P. Hancock, mgr., water well construction, developme... Tex. 41-569, to H. H. Haskell, Pampa, $18,7... **FWA.** Bids 2/23. CD 2/12—ENR 1/21.

Tex., Denison—Repairing Randell La... water supply source, force account. Appro... $40,000.

Alta., Lethbridge—Municipality storm a... watermain extens., day labor. $21,000 vot...

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Conn., Stamford—Chas. E. Moore, mayor, Town Hall, storm sewers Strawberry Hi... Court and Bedford Sts. $25,000.

Kan., Kansas City—Fairfax Drainage Dist., 721 Minn. St., Kansas City, Kan., storm sewers. $42,000. Applied for FWA funds.

Kan., Parsons—Sewage disposal plant, $107,520. Applied for FWA funds. Black & Veatch, 4706 Bway., Kansas City, Mo., engrs. CD 3/10—ENR 3/12.

Mass., Wellesley—Dpt. Sewers, Town Hall, sewer extens., sewage disposal plant addn. Over $25,000.

Mich., Mt. Clemens — Macomb Co., Wm. Harper, drain comr., drains in Southern Macomb Co. area for prevention recurrence of floods, incl. 20 covered and open drains for storm waters. $248,220.

†Washington—U. S. Eng., 800 3 Ave., Seattle, sewers, water supply and distr. sys. Inv. 425.

B. C., Prince Rupert—Incinerator. $30,000. Dpt. National Defense, Ottawa, Ont., engrs.

Ont., London—City Clerk bids soon exten. 36 in. Mill St. tile trunk sewer exten. $27,000; 30 in. tile interceptor sewer exten. Victoria St. $20,000. R. W. Garrett, City Hall, engr. CD 1/20—ENR 1/28.

Ont., St. Thomas—London Twp., St. Thomas, 14 mi. drain. F. Bell, County Bldg., engr.

Ont., St. Thomas—E. M. Bennett, city clk., sanitation and drainage program. $120,000.

BIDS ASKED

Bids Asked March 12

†Ga., Rossville—Pub. Bldgs. Admin., North Interior Bldg., Wash., D. C., storm sewers, etc.

†N. C., Goldsboro—Federal Works Agency, 606 State Planters Bank Bldg., Richmond, Va., addnl. sewerage facilities, incl. 15,700 ft. 10- to 24-in. vitr. clay pipe. $66,000 allot. W. C. Olsen, 5 Exchange Pl., Raleigh, engr. CD 2/9—ENR 2/11.

Bids Asked March 17

Calif., Los Angeles—City, emergency bypass structure for Sect. 1, Venice Outfall Sanitary sewers. L. Aldrich, City Hall, engr.

Wis., Milwaukee — Metropolitan Sewerage Comn., Jones Island, Milwaukee, 4,335 ft.